Attachment B:
Richland - Hanford Site – Central Plateau Soil and Groundwater Remediation Project Operating Plan

BACKGROUND

ARRA Project:	Richland - Hanford Site – Central Plateau Soil and Groundwater Remediation
TAFS:	89-09/10-0253
Project Identification Code:	2002141
Recovery Act Bill Reference:	PL 111-5, Title IV – Energy and Water Development, Defense Environmental Cleanup (H.R. 1-26)
Project Cost:	$235,503,000
Budget Authority:	STARS Fund Code: 06049, FD0220
Program Office:	Environmental Management (EM)
Recovery Program Plan:	EM - Defense
Management Office:	**Dave Brockman**, Manager, Richland Operations Office, (David_A_Brockman@rl.gov), 509-376-7395 **Jon Peschong**, RL Recovery Program Manager, Richland Operations Office, (Jon_Peschong@rl.gov), 509-376-4424

LEADS

Implementation:	Richland – Hanford Site
Breakthrough:	NA
Laboratory:	NA

I. SUMMARY & OBJECTIVES

Summary:

The Central Plateau Soil and Groundwater remediation project (RL-0030.R1) includes all design and construction activities necessary to complete the Operable Unit 200-ZP-1 and 100D Area groundwater pump and treatment facilities and Bioremediation deployment for groundwater, installation of 265 wells and/or boreholes along the river and in the Central Plateau, and decommissioning 280 old wells and boreholes. The required funding of $235.5M from the American Recovery and Reinvestment Act (ARRA) supports the mission of DOE and Office of Environmental Management (EM) by providing resources to complete installation of groundwater remedies for the River Corridor and Central Plateau and decommissioning of the groundwater wells in the Central Plateau outer zone. ARRA funding provides the ability to accelerate the completion of this work by up to five years; from 2016 to 2011. Project work will accelerate the drilling and installation of new groundwater remediation systems in the 200 West and 100 H Areas by approximately 4 years. Additionally, it will accelerate demolition of wells by approximately 5 years. Implementing this ARRA scope supports footprint reductions

activities of the Central Plateau and River Corridor and is considered the final remedy for groundwater operable units located in the 100 and 300 areas including 200-UP-1, 200-ZP-1, 100-HR-3, and 100-KR-4.

This project supports the following DOE and EM Strategic Goals and Themes:

- DOE Strategic Plan Theme 4 –Environmental Responsibility – Protecting the environment by providing a responsible resolution to the environmental legacy of nuclear weapons production.
- DOE Strategic Plan Theme 5 – Management Excellence – Enabling the Department's mission through sound management and business practices.
- EM Recovery Goals – Soil and groundwater remediation and reduction of environmental threats to areas surrounding the sites.

The original purpose and scope of the existing contract will not change with the addition of the ARRA funding. The overall goal is to accomplish the mission of DOE-RL by eliminating environmental threats to the Columbia River and reducing the overall footprint of the Hanford Site through remediation of soil and groundwater.

Public Benefits:

Public benefits resulting from Recovery Act funding range from job creation, to cost savings over the life-cycle of the EM program, to enhanced environmental protection due to the cleanup and closure of the Hanford sites from the former nuclear weapons complex. High-risk facilities will be deactivated and demolished. This will reduce the potential safety and health risks.

Recovery Act funding will be used by Hanford contractors to accelerate cleanup of the former weapons complex and nuclear research facilities. The site contractors and subcontractors will hire workers to perform the additional soil and groundwater remediation, decontamination and decommissioning, and waste processing activities. The additional jobs are expected to extend through the entire period of Recovery Act activities in EM.

To counteract the unemployment rate in Washington State of 9.2 percent and bolster the local economy, numerous on-site jobs will be created and/or retained at Hanford by implementing this project. Types of jobs created or retained will include well drillers, soil excavation personnel, construction and demolition personnel, waste processors and handlers, railroad train crews, waste truck drivers, construction laborers, engineers, heavy equipment operators, field technicians, and administrative support workers. The large number of workers trained by completing this project would be available for future missions. Personnel brought in for this initiative could also provide a critical source of employees to support completion of the EM mission at the site necessitated by the current aging Hanford workforce and attrition associated with the expanding nuclear industry. Surrounding area businesses will also experience job creation benefits from this work scope initiative. Additional benefits of off-site jobs will likely be created in the surrounding communities due to the influx of new workers.

ARRA Project Impacts:

Hanford has demonstrated success in solid radioactive waste disposition, soil and groundwater remediation, and facility decontamination and decommissioning. Hanford will effectively spend the Recovery Act funding because these cleanup activities are associated with:

- Proven technologies—on-the-shelf plans and projects ready to be implemented
- Regulatory infrastructure in place—established regulatory framework with regulator and community support
- Acquisition structure in place—flexible contract vehicles allow quick expansion of environmental cleanup workforces
- Project Management structure in place—ability to track and measure performance.

Investment in this project will contribute to the prevention of groundwater contaminants from migrating to the Columbia River. This scope contributes in preventing further degradation returning groundwater to beneficial use and enabling reuse of EM infrastructure for other energy missions, other industrial, commercial, recreational and/or community uses. This project will provide a rough order of magnitude (ROM) life-cycle savings of approximately $306M. There is an expectation that project risks will be reduced by implementing regulatory strategies in the near term which is not included in this subproject estimated Life-Cycle cost savings.

II. COST & SCHEDULE

Budget

Adjustments to obligations based on contract definitization are expected per EM approval.

Table 1a: Budget Implementation 12 Week Obligations ($M)

	Week of ARRA Activities (Beginning Week of March 9)											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Hanford – 1000 Soil & Groundwater				117								

Table 1b: Budget Implementation 12 Week Expenditures ($M)

	Week of ARRA Activities (Beginning Week of March 9)											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Hanford – 1000 Soil & Groundwater	0	0	0	0	0	0	0	.1	0	0	0	.7

Table 2a: Budget Implementation Monthly & Yearly Obligations ($M)

	FY 2009 Q3			FY 2009 Q4			FY 2010 Q1		
	Apr	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
Hanford – 1000 Soil & Groundwater	NA	NA	0	0	0	0	0	0	0
	FY 2010 Q2			**FY 2010 Q3**			**FY 2010 Q4**		
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**
	89.7	0	0	0	0	0	0	0	0
	FY 2011 Q1			**FY 2011 Q2**			**FY 2011 Q3 & Q4**		
	Oct	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr – Sept**		
	0	0	0	0	0	0	28.8		
	FY 2012			**FY 2013**			**FY 2014**		**FY 2015**
	0			0			0		0

Table 2b: Budget Implementation Monthly & Yearly Expenditures ($M

	FY 2009 Q3			FY 2009 Q4			FY 2010 Q1		
	Apr	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
Hanford – 1000 Soil & Groundwater	NA	NA	.5	2.9	1.6	3.9	4.8	4.8	8
	FY 2010 Q2			**FY 2010 Q3**			**FY 2010 Q4**		
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**
	11	9	9	19	10	10	18	11	20
	FY 2011 Q1			**FY 2011 Q2**			**FY 2011 Q3 & Q4**		
	Oct	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr – Sept**		
	7.2	9	9	7	7	7	45		
	FY 2012			**FY 2013**			**FY 2014**		**FY 2015**
	0			0			0		0

Funds Returned and Offsetting Collections

Note: No returned funds or any offsetting collections are expected to be received as a result of carrying out any ARRA projects.

Table 3: Funds Returned and Offsetting Collections ($M)

	FY 09	**FY 10**	**FY 11**	**FY 12**	**FY 13**	**FY 14**	**FY 15**
[Provide description and amounts for Funds Returned and Offsetting Collections]	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Indirect Costs

This work will be performed by facility management contractors utilizing an approved indirect rate structure. All Hanford contractor indirect rates are subject to an annual audit review by the Defense Contract Audit Agency (DCAA) and require final approval by the Contracting Officer.

The Plateau Remediation Contract (PRC) has a General and Administrative (G&A) rate of 15.6% (currently under DCAA review). G&A functions include Finance, Human

Resources, Legal, Internal Audit, Procurement, Information technology, organizational administration, dosimeter and usage based services supporting overhead activities. Because G&A is distributed on a total cost base for the Plateau Remediation Contract (PRC), ARRA funds will also be assessed G&A. Since the ARRA funds represent a significant increase in contract funding it is likely the G&A rate will decrease in the out-years.

Changes to Baseline Budget

Table 4: Changes to Baseline Budgets ($M)

Changes to Baseline Budget	Increase/Decrease	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Program Direction After FY 2010	Increase	…	…	0	0	0	0	0
Continuation of New Programs	Increase	…	0	0	0	0	0	0
Project Acceleration	Increase	…	0	0	0	0	0	0

Note: The RL Recovery Act projects involve accelerating existing projects. This will result in changes to the baseline budgets in the long term. Potential out-year savings include accelerating installation of final groundwater remedies originally scheduled to be completed in 2016 to now be completed in 2011 through utilization of ARRA funds. Work scope delineated in this POP was funded in PRC contract mod A037 dated 4/9/2009. Corrected baseline funding will be finalized with the submittal and approval of the Contract Performance Baseline.

Milestones

The milestones and performance measures provided in Table 7 are based on the best available information about ARRA requirements and existing project definitions. Estimates have been developed to date for costs and associated end-state and interim milestones and performance measures. As the detailed estimates and resource-loaded schedules (using Primavera 6.2) are developed, completed updates will be made to the milestones and measured.

As this scope is integrated into the RL baseline, but tracked and reported separately and uniquely, the internal DOE approved change control process will be applied to all ARRA scope.

Table 5: Delivery Schedule for Capital Asset Projects

Program/OECM Milestone	Delivery (End) Date	Comments
Develop capital asset projects Integrated Project List	6/17/2009	N/A
Develop Parametric Performance Baseline (Individual Projects)	6/8/2009	N/A
If < $100 M Perform IPR, > $100	N/A	Decided by EM to perform only on RL-

M Perform EIR (Individual Projects)		0011 and RL-0040
Approve Contractor's Performance Baseline	4/29/2010	N/A
Approve Start of Construction	10/1/2009 6/15/2010	100D/H P&T 200-ZP-1 P&T
Project Completion	9/30/2011	N/A

III. PERFORMANCE

Table 6: Performance Measures

Hanford Site – Groundwater Remediation	
ARRA Project Identification Code	**2002141**
Subproject: Soil and Water Remediation	
Key Performance Parameter 1:	**Operable Unit ZP-1 groundwater pump and treatment system construction complete.**
Associated Key Metrics:	• Percent complete on 30% design complete milestone • Percent complete on final design complete milestone • Percent complete on construction complete milestone • Percent complete on acceptance testing complete milestone
Key Performance Parameter 2:	**100 D Area groundwater pump and treatment system construction complete.**
Associated Key Metrics:	• Percent complete on 30% design complete milestone • Percent complete on final design complete milestone • Percent complete on construction complete milestone • Percent complete on acceptance testing complete milestone
Key Performance Parameter 3:	**Install 265 wells and/or boreholes along the river and in the Central Plateau**
Associated Key Metrics:	• Wells and boreholes completed (#)
Key Performance Parameter 4:	**Decommission 280 old wells and boreholes**
Associated Key Metrics:	• Wells and boreholes decommissioned (#)

The period of performance for the ARRA work begins April 2009 through September 30, 2011.

Contractors will continue to use approved processes and procedures to meet these requirements. Additionally, the contractor shall certify in each monthly report that the costs included in the report for ARRA work were incurred only to accomplish the ARRA work in accordance with the accelerated work scope.

Table 7: Project Performance Targets

ARRA Project Identification Code	2002141
Linkage To S-1 Priorities	National Security and Legacy - Eliminate environmental threats to Columbia River., Remediation of waste sites, Decontamination and Decommissioning of legacy facilities, Reduce EM legacy footprint
Linkage to Current Program Goal (if applicable)	EM Goals – Environmental responsibility to protect the environment
Three-Year Outcome-Oriented Performance Measure	By the end of Fiscal year 2011, complete installation of final groundwater remedies in the River Corridor and Central Plateau
First Year Performance Target (2009)	Initiate procurement activities for River Corridor Soil and Groundwater
Q3 - Project-Level Quarterly Performance Milestone(s)	• Issue notice to proceed
Q4 - Project-Level Quarterly Performance Milestone(s)	• Complete Contract Modification for definitized Recovery Act work scope. • Mobilization, support, and initiation of well installation for the 100 Area KR-4 operable unit groundwater remediation system • Initiate Decommissioning of boreholes
Second Year Performance Target (2010)	Achieve progress in well installation to support 100D Pump and Treat Implementation
Q1 - Project-Level Quarterly Performance Milestone(s)	• Install Characterization Wells for 100K Area Operable Unit • Start construction expansion of 100D/H pump and treat system. • Start 200-ZP-1 pump and treat design and procurements. • Continue Decommissioning of boreholes
Q2 - Project-Level Quarterly Performance Milestone(s)	• Install Characterization Wells for 100K Area Operable Unit • Mobilize and install KR-4 Gradient Control Wells for 100K Operable Unit • Continue construction expansion of 100D/H pump and treat system. • Continue 200-ZP-1 pump and treat design and procurements. • Continue Decommissioning of boreholes
Q3 - Project-Level Quarterly Performance Milestone(s)	• Install Characterization Wells for 100K Area Operable Unit • Install KR-4 Gradient Control Wells for 100K Operable

	Unit • Continue construction expansion of 100D/H pump and treat system. • Continue 200-ZP-1 pump and treat design and procurements. • Continue Decommissioning of boreholes
Q4 - Project-Level Quarterly Performance Milestone(s)	• Mobilize and install KR-4 Gradient Control Wells for 100K Operable Unit • Continue construction expansion of 100D/H pump and treat system. • Start Construction of ZP-1 pump and treat system. • Continue Decommissioning of boreholes
Third Year Performance Target	Achieve construction completion for groundwater remedies in the 100D and 200-ZP-1 Areas
Q1 - Project-Level Quarterly Performance Milestone(s)	• Install KR-4 Gradient Control Wells for 100K Operable Unit • Continue construction expansion of 100D/H pump and treat system. • Continue construction of ZP-1 pump and treat system. • Continue Decommissioning of boreholes
Q2 - Project-Level Quarterly Performance Milestone(s)	• Continue construction expansion of 100D/H pump and treat system. • Continue construction of ZP-1 pump and treat system.
Q3 - Project-Level Quarterly Performance Milestone(s)	• Continue construction expansion of 100D/H pump and treat system. • Continue construction of ZP-1 pump and treat system. • Continue Decommissioning of boreholes
Q4 - Project-Level Quarterly Performance Milestone(s)	• Construction expansion completion of 100D/H pump and treat system. • Construction of ZP-1 pump and treat complete. • Decommissioning of boreholes complete.

Note: The scope of the KPPs is subject to change due to completion of definitization and baseline approval per DOE O 413.3A.

Remaining Funds Management

For Recovery Act work at DOE-RL, cost estimates and schedules were developed at high confidence levels. Because of this, the possibility exists that ARRA project funds will be available to apply to additional scope during FY 2010 - 2012 as a result of cost savings due to efficiencies or under utilization of Management Reserve (MR) and Contingency. If available, these remaining funds could further help DOE realize the accelerated cleanup of the Hanford Site and support the Hanford ARRA mission of creating jobs, reducing the footprint and realizing lifecycle cost savings. Subsequently, preliminary planning has been performed to identify a list of existing base-funded work scope that may be funded by the ARRA.

The approach DOE-RL is taking to manage these funds includes:

- Quantifying the efficiencies, and MR/contingency under utilization to-date and forecasting efficiencies and underutilization of MR/contingency through FY 2011
- Identifying and estimating scope candidates that exist outside currently defined ARRA prime contractor scope that would also support the mission of jobs, footprint reduction and lifecycle cost savings,
- Reviewing the current baseline to definitize priority, cost, targets, and metrics for remaining candidates that could be accelerated.

Once these tasks are completed, a re-apportionment request will be submitted in June 2010 to ensure current performance commitments are sufficiently funded and to align remaining ARRA funds (including projected efficiencies, unused MR and contingency dollars) with the highest priority work scope. Additionally, the POPs will be revised and submitted that define priority, cost, targets and metrics for the remaining work scope. The following table identifies potential candidates for scope acceleration.

Table 8: Remaining funds scope candidates

Central Plateau Soil and Groundwater
Soil and GW Activity
Projected 2011 budget shortfall coverage of TPA compliance activities in support of the Hanford cleanup mission.

National Strategic Benefits

This project provides for protection of the Columbia River and therefore has significant benefit to the Pacific Northwest. It does not directly provide national strategic benefit such as reduction of carbon emissions or oil consumption.

Table 9: National Strategic Benefits

Recovery Act National strategic goals	Benefits
Promote Energy Efficiency	N/A
Deploy Renewable Power	N/A
Modernize the Grid	N/A
Reduce Oil Consumption	N/A
Restore America's Scientific Leadership	N/A
Reduce Legacy Environmental Footprint	N/A
Reduce Greenhouse Gas Emissions	N/A

IV. MANAGEMENT

Secretarial-level Items

Table 10: Secretary's Priorities

Secretary's Priorities	Project Impacts (Qualitative)	Project Impacts (Quantitative)
Science and Discovery	N/A	N/A
Clean, Secure Energy	N/A	N/A
Economic Prosperity	• Create new jobs. • Retain existing jobs.	• Support overall RL goal of 3900 jobs (See Note)
National Security and Legacy	• Eliminate environmental threats to Columbia River. • Remediation of contaminated groundwater/soil • Reduce operational footprint of Hanford Site	• Operable Unit ZP-1 groundwater pump and treatment system construction complete. • 100-D Area groundwater pump and treatment system construction complete. • Decommissioning of 280 legacy boreholes.
Climate Change	N/A	N/A

Note: Quantitative goal of 3900 jobs is subject to change based on EM and OMB guidance.

Collaboration and Coordination

Commercially-operated waste treatment/storage/disposal Facilities will be needed to support treatment of waste generated during the ARRA Project. Coordination with these interfaces already exists however will be enhanced throughout this project.

The DOE-RL Procurement Division will continue to work closely with DOE-EM and DOE-MA to insure timely business clearance approval for procurement actions that exceed local authority.

There are many external interfaces associated with the normal base program and Recovery Act project work and operations at Hanford. These include:

- **Regulatory** Environmental Protection Agency, Washington Department of Ecology, Department of Transportation, and Defense Nuclear Facilities Safety Board
- **Community** Hanford Advisory Board, Benton and Franklin Counties, cities of Richland, Pasco and Kennewick, Surrounding States, Nevada, and Utah
- **Industry** Environmental Engineering/Remediation, Waste Management, Construction, Cement, Container, Transportation, Housing, Utilities, etc.
- **Other** Other RL Contractors, Labor Unions, Parent Companies, Local Universities/Colleges

Federal Infrastructure Investments

N/A

Line Management

In executing this ARRA project, DOE-RL will implement the project management requirements of DOE O 413.3A, *Program and Project Management for the Acquisition of Capital Assets*. DOE-RL will use the flexibility afforded by DOE O 413.3A and tailor its requirements to this project. This tailored approach will maintain the utility and value of clear project definition, configuration management and change control, and sound project controls, including earned value management.

DOE-RL intends to use existing EM site systems and practices to effectively monitor and report on the ARRA Project activities, including:

- Fully implement all ARRA transparency and reporting requirements through modifications to the contract that will fund this ARRA Project.
- Continue using approved programs and procedures currently in place with Hanford contractors and their subs, applying project management principles to ARRA Project execution, including reviewing and validating EM project cost and schedule baselines consistent with DOE Order 413.3 and identifying project risks and strategies for managing them.
- Continue use of industry standard Earned Value Management System (EVMS) to compare actual project scope, cost, and schedule performance against planned performance as depicted in the baseline.
- Continue monitoring of the contractors' EVMS reports to ensure the ARRA Project is on track and, if not or if trends are in a negative direction, to develop and implement corrective actions.
- Hold monthly management reviews to provide updates on the ARRA Project to EM's senior-most executives.
- Secure support service contractors to provide support to federal staff in the areas of procurement, project controls, safety, and project support.
- Assign appropriately qualified staff to the ARRA Project to provide technical and programmatic oversight of the contractors performing the work and be the day-to-day governmental interface and manager for the project.
- Use an Integrated Project Team (IPT) of Federal and contractor staff with project knowledge and subject matter expertise essential to the successful planning and execution of the project – including safety, risk management, engineering, quality assurance, contracts administration, and project controls.
- Develop detailed risk management plans for the ARRA Project to identify and mitigate risks, and assign roles and responsibilities for managing the risks.

Needs from Staff Offices

N/A

Human Capital

DOE-RL will continue to use support service contractors to provide support to federal staff in the areas of procurement, project controls, safety and project support.

Note: DOE-RL has developed an integrated incremental staffing profile to support staff administering ARRA work. This staffing profile is wholly contained in Central Plateau D & D Project Operating Plan (2002140)

Table 11: Information on Hiring Under the ARRA

# & Type of Positions (Title, Series and Grade)	**Location** (HQ or Field – w/location)	**Federal or Contractor**	**Timeframe** (1-6mos; 6+mos; other; specify date needed if possible)
N/A	N/A	N/A	N/A

Procurement

Though scope will be accelerated with the addition of ARRA funds, the original scope and purpose of the Plateau Remediation Contract (PRC) contract will not change. The purpose of this contract continues to be furnishing safe, compliant, cost-effective and energy-efficient services to further the DOE-RL mission.

This contract applies performance-based contracting approaches; expects the Contractor to implement techniques that maximize performance efficiencies, through innovation and scope completion, and minimize the description of how to accomplish the scope of work. The contractor is responsible for determining the specific methods and approaches for accomplishing the work scope in accordance with contract required environmental, safety and health (ES&H) requirements. The intent of the proposed contract modifications is to provide additional funding to meet the original contract funding profile and accelerate defined work that was contemplated in the contract period.

Table 12: Procurement Plans

Activity	Type	New/Exist (N/E)	Changes (E), Needs (N)	Status	Expected Complete	Issues (Y/N)
Plateau Remediation Contract - Environmental Remediation Work	Contract	E	(E) Funding Modifications	Contract Mod A037 April 9 2009	Completed	N